

IN THE CLAIMS:

1 1. (CURRENTLY AMENDED) An intermediate network device for use in a computer
2 network carrying network traffic corresponding to sessions, the intermediate network de-
3 vice comprising:

4 a traffic scheduler having one or more resources for use in forwarding network
5 traffic received at the device at different rates;

6 a classification engine configured to identify the received network traffic based
7 upon predefined criteria; and

8 a resource reservation engine in communicating relationship with the traffic
9 scheduler and the classification engine;

10 a receiver arranged to receive a first request from a first sourcing entity for a first
11 session to a first receiving entity, wherein the first session is assigned a session group
12 identifier (ID); ~~wherein the receiver further arranged to~~ receives a second request from
13 the first sourcing entity for a second session to a second receiving entity, wherein the
14 second request is assigned a second group ~~identifier~~ identifier (ID); ~~and~~

15 wherein, in response to the requests to reserve resources, the resource reservation
16 engine determines whether the session group ID of the first session matches the session
17 group ID of the second session ~~for which resources have previously been reserved and, if~~
18 so, directs the traffic scheduler to share ~~the resources~~ that are reserved for the ~~one or~~
19 ~~more~~ second sessions with the first session.

1 2. (ORIGINAL) The intermediate network device of claim 1 wherein

2 the resource reservation engine includes a data structure for storing information
3 for the sessions, and

4 the resource reservation engine stores a session group identifier (ID) for each ses-
5 sion in the data structure.

1 3. (ORIGINAL) The intermediate network device of claim 2 wherein the session group
2 identifier associated with a given session includes a source address of an entity sourcing
3 the traffic flow of the given session and a resource identifier (ID).

1 4. (ORIGINAL) The intermediate network device of claim 3 wherein:
2 the resource reservation engine utilizes the Resource reSerVation Protocol
3 (RSVP) specification standard, and
4 the session group ID of a given session is contained in a RSVP Path message as-
5 sociated with the given session.

1 5. (CURRENTLY AMENDED) The intermediate network device of claim 4 wherein
2 the first and the ~~one or more~~ second sessions carry voice information.

1 6. (CURRENTLY AMENDED) The intermediate network device of claim 5 wherein
2 the first and the ~~one or more~~ second sessions originate from a single sourcing entity.

1 7. (CANCELLED)

1 8. (CURRENTLY AMENDED) The intermediate network device of claim 7 wherein
2 the first and the ~~one or more~~ second sessions carry voice information and correspond to a
3 call waiting context.

1 9-18 (CANCELLED)

1 19. (PREVIOUSLY PRESENTED) A method for reserving resources by a network de-
2 vice for transmission of messages through a computer network comprising:

3 receiving a first request from a sourcing entity for initiating a first session to a
4 first receiving entity by the network device;
5 identifying the first session by writing a session group identifier (session ID) into
6 packets of the first session;
7 receiving a second request from the sourcing entity for initiating a second session
8 to a second receiving entity for initiating a second session using the session ID of the first
9 session; and
10 transmitting a setup message to enable other network devices to share resources
11 between the first session and the second session in response to both the first and second
12 sessions having the same session ID.

1 20. (PREVIOUSLY PRESENTED) The method of claim 19 further comprising:
2 including a data structure for storing information for the sessions in a resource
3 reservation engine, and
4 storing the session ID for each session in the data structure in the resource reser-
5 vation engine.

1 21. (PREVIOUSLY PRESENTED) The method of claim 20 further comprising:
2 identifying a given session by a source address of an entity sourcing the traffic
3 flow of the session and a resource identifier (ID).

1 22. (PREVIOUSLY PRESENTED) The method of claim 21 further comprising:
2 utilizing the Resource reSerVation Protocol (RSVP) specification standard in the
3 resource reservation engine, and
4 inserting the session ID of a session in a RSVP Path message associated with the
5 given session.

1 23. (CURRENTLY AMENDED) The method of claim 22 further comprising:
2 carrying voice information over the first and the ~~one or more~~ second sessions.

1 24. (PREVIOUSLY PRESENTED) The method of claim 23 further comprising:
2 originating the first and the one or more second sessions from a single sourcing
3 entity.

1 25. (CANCELLED)

1 26. (CURRENTLY AMENDED) The method of claim 25 further comprising:
2 carrying voice information which corresponds to a call waiting context over the
3 first and the ~~one or more~~ second sessions carry voice information.

1 27. (PREVIOUSLY PRESENTED) A network device for reserving resources in trans-
2 mission of messages through a computer network comprising:
3 means for receiving a first request from a sourcing entity for initiating a first ses-
4 sion to as first receiving entity by the network device;
5 means for identifying the first session by writing a session group identifier (ses-
6 sion ID) into packets of the first session;
7 means for receiving a second request from the sourcing entity for initiating a sec-
8 ond session to a second receiving entity using the session ID of the first session; and
9 means for transmitting a setup message to enable other network devices to share
10 resources between the first session and the second session in response to both the first
11 and second sessions having the same session ID.

1 28. (PREVIOUSLY PRESENTED) The device of claim 27 further comprising:
2 means for including a data structure for storing information for the sessions in a
3 resource reservation engine, and
4 means for storing the session ID for each session in the data structure in the re-
5 source reservation engine.

1 29. (PREVIOUSLY PRESENTED) The device of claim 28 further comprising:
2 means for identifying a given session by a source address of an entity sourcing
3 the traffic flow of the session and a resource identifier (ID).

1 30. (PREVIOUSLY PRESENTED) The device of claim 29 further comprising:
2 means for utilizing the Resource reSerVation Protocol (RSVP) specification stan-
3 dard in the resource reservation engine, and
4 means for inserting the session ID of a session in a RSVP Path message associ-
5 ated with the given session.

1 31. (CURRENTLY AMENDED) The device of claim 30 further comprising:
2 | means for carrying voice information over the first and the ~~one or more~~ second
3 sessions.

1 32. (CURRENTLY AMENDED) The device of claim 31 further comprising:
2 | means for originating the first and the ~~one or more~~ second sessions from a single
3 sourcing entity.

1 33. (CANCELLED)

1 34. (CURRENTLY AMENDED) The device of claim 33 further comprising:
2 means for carrying voice information which corresponds to a call waiting context
3 | over the first and the ~~one or more~~ second sessions carry voice information.

35-50 (CANCELLED)

1 51. (CURRENTLY AMENDED) A system for reserving resources in transmitting mes-
2 sages through a computer network comprising:

an intermediate network device adapted to (a) initiate a first session to a first receiving ~~entity~~entity, (b) identify the first session by writing a session group identifier (session ID) into packets of the first session, (c) initiate one or more second sessions to one or more second receiving ~~entites~~entities using the session ID of the first session, and (d) transmit a setup message to enable other network devices to share resources between the first session and the second session in response to both the first and second sessions having the same session ID.

52. (PREVIOUSLY PRESENTED) The system of claim 51 wherein a data structure is included for storing information for the sessions in a resource reservation engine, and wherein the session ID for each session is stored in the data structure in the resource reservation engine.

53. (PREVIOUSLY PRESENTED) The system of claim 52 wherein a given session is identified by a source address of an entity sourcing the traffic flow of the session and a resource identifier (ID).

54. (PREVIOUSLY PRESENTED) The system of claim 53 wherein a Resource reSer-
Vation Protocol (RSVP) specification standard is utilized in the resource reservation engine, and wherein the session ID of a session is inserted in a RSVP Path message associated with the given session.

55. (PREVIOUSLY PRESENTED) The system of claim 54 wherein the first and the one or more second sessions carry voice information.

56. (PREVIOUSLY PRESENTED) The system of claim 55 wherein the first and the one or more second sessions originate from a single sourcing entity.

57. (CANCELLED)

1 58. (PREVIOUSLY PRESENTED) The system of claim 57 wherein the first and the
2 one or more second sessions carry voice information and correspond to a call waiting
3 context.

59-68 (CANCELLED)

1 69. (PREVIOUSLY PRESENTED) A computer readable media, comprising:
2 said computer readable media having information written thereon, said informa-
3 tion having instructions for execution on a processor for the practice of a method for re-
4 serving resources by a network device for transmission of messages through a computer
5 network, the method having the steps of:
6 initiating a first session to a first receiving entity by the network device;
7 identifying the first session by writing a session group identifier (session ID) into
8 packets of the first session;
9 initiating one or more second sessions to one or more second receiving entities us-
10 ing the session ID of the first session; and
11 transmitting a setup message to enable other network devices to share resources
12 between the first session and the second session in response to both the first and second
13 sessions having the same session ID.

70-72 (CANCELLED)

1 73. (PREVIOUSLY PRESENTED) Electromagnetic signals propagating on a computer
2 network, comprising:
3 said electromagnetic signals carrying information having instructions for execu-
4 tion on a processor for the practice of a method for reserving resources by a network de-

5 vice for transmission of messages through a computer network, the method having the
6 steps of:
7 initiating a first session to a first receiving entity by the network device;
8 identifying the first session by writing a session group identifier (session ID) into
9 packets of the first session;
10 initiating one or more second sessions to one or more second receiving entities us-
11 ing the session ID of the first session; and
12 transmitting a setup message to enable other network devices to share resources
13 between the first session and the second session in response to both the first and second
14 sessions having the same session ID.

1 74. (CANCELLED)

1 75. (PREVIOUSLY PRESENTED) A method for reserving resources to transmit mes-
2 sages through a computer network comprising:
3 selecting a group session ID for establishing a first session;
4 establishing the first session from a network sourcing device to a first network
5 receiving device routing through an intermediate network device;
6 using the same group session ID for establishing a second session;
7 establishing the second session from the network sourcing device to a second net-
8 work receiving device routing through the intermediate network device; and
9 sharing, in response to the first session and the second session having the same
10 group session ID, resources reserved for the first session with the second session.

1 76. (PREVIOUSLY PRESENTED) The method of claim 75, further comprising:
2 receiving by the intermediate network device a first message of the first session
3 and a second message of the second session, the first message and the second message
4 having the same group session ID; and

5 sharing by the intermediate network device, in response to the first message and
6 the second message having the same group session ID, resources reserved for the first
7 session with the second session.

1 77. (PREVIOUSLY PRESENTED) A network device for reserving resources to trans-
2 mit messages through a computer network comprising:

3 means for selecting a group session ID for establishing a first session;
4 means for establishing the first session from a network sourcing device to a first
5 network receiving device routing through an intermediate network device;
6 means for using the same group session ID for establishing a second session;
7 means for establishing the second session from the network sourcing device to a
8 second network receiving device routing through the intermediate network device; and
9 means for sharing, in response to the first session and the second session having
10 the same group session ID, resources reserved for the first session with the second ses-
11 sion.

1 78. (PREVIOUSLY PRESENTED) The method of claim 77, further comprising:

2 means for receiving by the intermediate network device a first message of the first
3 session and a second message of the second session; and
4 means for sharing by the intermediate network device, in response to the first
5 message and the second message having the same group session ID, resources reserved
6 for the first session with the second session.

1 79. (CURRENTLY AMENDED) A network device for reserving resources to transmit
2 messages through a computer network comprising:

3 a signaling entity ~~detecting~~ configured to detect a situation where a second session
4 between a network sourcing device and a second network receiving device can share the
5 resources reserved for a first session between the network sourcing device and a first
6 network receiving device;

7 a resource identifier (ID) generator configured to, in response to a situation where
8 the second session can share resources reserved for the first session, selecting a same
9 group session ID for the first session and the second session; and

10 a message generator configured to sending a first message to establish the first
11 session, and to sending a second message to establish the second session, the message
12 generator including the group session ID in both the first message and the second mes-
13 sage.

1 80-83. (CANCELLED)